Instructions

1. Please visit the following web page and generate an API key:
   1. https://api.nasa.gov/#browseAPI
2. Once you have an API key, navigate to the " Browse API's" page in the same link that before.
3. Choose "Mars Rover Photos" and read the API instructions and examples. Test out some URL's in your browser and see what it returns and <mark>pay close attention to the structure.</mark>
4. Visit the following web pages and become familiar with how to use the Menu module to create structured menu's in the terminal:
   1. https://pypi.org/project/Menu/
   2. https://github.com/dylanrichardson/Menu
   3. https://github.com/dylanrichardson/Menu/blob/master/test/example.py
5. Visit the following web page and become familiar with how to work with JSON based web services (<mark>don't do the project, just read it</mark>). <mark>This will introduce you to</mark> some basic <mark>Python structures</mark> like lists and dictionaries and <mark>how to fetch json data</mark>:
   1. https://projects.raspberrypi.org/en/projects/where-is-the-space-station/0
6. Write a simple terminal app that uses menus to allow you to:
   * Choose one of the Mars rovers.
   * Prompt the user for a date.
   * Show a menu of available photos for that date.
   * Let the user choose and view a photo.
   * Return to the menu after closing the photo
7. Import all the required libraries for this assignment at the top of your file:

```
from requests import get
import json
from PIL import Image
from io import BytesIO
from menu import Menu
```

8. In MS Teams under Files, find document explaining how to install libraries using the pip command.
9. After importing the correct libraries, you can display a photo like this:

```
def display_photo(url):
    """Displays the photo found at url."""
    img_resp = get(url)
    img = Image.open(BytesIO(img_resp.content))
    img.show()
    img.close()
```

10. You can fetch a URL and retrieve the data like this, which will return a native dictionary, don't forget to paste the URL in your browser to examine what it returns:

```
API_KEY  =  "paste_your_api_key_string_here"
url_rovers = f"https://api.nasa.gov/mars-photos/api/v1/rovers?
api_key={API_KEY}" all_rovers = get(url_rovers).json()  # fetch list of all available rovers
```

Bonus

Display only 10 photo menu options at a time and implement Back/Next menu items to navigate through all the photos.